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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,475	02/20/2004	Kuo-Tong Ma	B-5376 621715-0	7459

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EXAMINER

UHLENHAKE, JASON S

ART UNIT	PAPER NUMBER
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2853

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/783,475

Applicant(s)

MA ET AL.

Examiner

Jason Uhlenhake

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

Claim 19 is objected to because of the following informalities: "filling an ink into the ink cartridge to pass through the treated the ink passage". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6, 10, 12, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hobson et al (U.S. Pat. 6,199,979).

Hobson et al discloses:

- ***regarding claim 1***, method for filling an ink into an ink cartridge comprising: treating a filter with a surfactant to increase the hydrophilicity of the filter, wherein the filter has pores (Column 8, Lines 1 – 10)

Art Unit: 2853

- installing the treated filter in an ink cartridge (Column 3, Lines 13-15; Column 3, Lines 30-31); filling an ink into the ink cartridge to pass through the treated filter (Column 3, Lines 13-35; Column 5, Lines 13-16)
- **regarding claim 3 and claim 12**, wherein the filter is a fiber filter, nylon filter, foamed filter or metal filter (Column 9, Lines 1 – 15)
- **regarding claim 6 and claim 15**, wherein the surfactant is used singly (Column 8, Lines 1 – 10)
- **regarding claim 10**, method for filling an ink into an ink cartridge comprising: installing a filter in an ink cartridge, wherein the filter has pores (Column 3, Lines 13 – 35; Column 5, Lines 13-16)
- treating the filter with a surfactant to increase the hydrophilicity of the filter (Column 8, Lines 1 – 10)
- filling an ink into the ink cartridge to pass through the treated filter (Column 3, Lines 13 – 24; Column 5, Lines 13-16)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Kitahara (U.S. Pat. 6,190,009).

Hobson et al discloses all of the claimed limitations except for the following:

- ***regarding claim 2 and claim 11***, wherein when the ink is filled into the ink cartridge, the pore of the filter and the ink surface are at an angle less than 90 degrees

Kitahara discloses:

- ***regarding claim 2 and claim 11***, wherein when the ink is filled into the ink cartridge, the pore of the filter and the ink surface are at an angle less than 90 degrees (Column 2, Lines 66 – 67; Column 3, Lines 1 – 10)

At the time the invention was made it, would have been obvious to a person of ordinary skill in the art to incorporate the teaching of ink is filled into the ink cartridge, the pore of the filter and the ink surface are at an angle less than 90 degrees as taught by Kitahara into the device of Hobson et al, for the purpose of supplying an adequate volume of ink to a recording head for printing.

Claims 4, 5, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Engel et al (U.S. Pat. 6,926,957).

Hobson et al discloses all of the claimed limitations except for the following:

- ***regarding claims 4, 13***, wherein the surfactant has an HLB value of 3 to 18
- ***regarding claims 5, 14***, wherein the surfactant has an HLB value of 6 to 15

Engel et al discloses the following:

Art Unit: 2853

- **regarding claims 4, 13**, wherein the surfactant has an HLB value of 3 to 18
(Column 7, Lines 19 – 23)
- **regarding claims 5, 14**, wherein the surfactant has an HLB value of 6 to 15
(Column 7, Lines 19 – 23)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of surfactant has an HLB value of 3 to 18 ; surfactant has an HLB value of 6 to 15 as taught by Engel et al into the device of Hobson et al. The motivation for doing so would have been to improve the coatability of the film.

Claims 7, 8, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Hayashi et al (U.S. Pub 2001/0035897).

Hobson et al discloses all of the claimed limitations except for the following:

- **regarding claim 7 and claim 16**, wherein the surfactant is dissolved in a solvent when used
- **regarding claim 8 and claim 17**, wherein the solvent is water or a hydrophilic solvent

Hayashi et al discloses the following:

- **regarding claim 7 and claim 16**, wherein the surfactant is dissolved in a solvent when used (Paragraph 0290)

Art Unit: 2853

- **regarding claim 8 and claim 17**, wherein the solvent is water or a hydrophilic solvent (Paragraph 0290)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of surfactant is dissolved in a solvent when used; the solvent is water or a hydrophilic solvent as taught by Hayashi et al into the device of Hobson et al. The motivation for doing so would have been to effect the movement of ink smoothly within a liquid flow path.

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) as modified by Hayashi et al (U.S. Pub 2001/0035897) as applied to claim 1 above, and further in view of Reem et al (U.S. Pub. 2004/0094065)

Hobson et al as modified by Hayashi et al discloses all of the claimed limitations except for the following:

- **regarding claim 9 and claim 18**, wherein the surfactant is present in an amount of 0.0001 to 10 weight %

Reem et al discloses the following:

- **regarding claim 9 and claim 18**, wherein the surfactant is present in an amount of 0.0001 to 10 weight % (Paragraph 0053)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of the surfactant is present in an amount of 0.0001 to 10 weight % as taught by Reem et al into the device of Hobson et

Art Unit: 2853

al as modified by Hayashi et al. The motivation for doing so would have been to reduce the gloss value of the printed image.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Uchikata (U.S. Pat. 6,024,428).

Hobson et al discloses:

- ***regarding claim 19***, method for filling an ink into an ink cartridge comprising: providing an ink cartridge having an ink passage, wherein the ink passage has a wall; filling an ink into the ink cartridge to pass through the ink passage (Figure 1; Cartridge walls)

Hobson et al does not disclose expressly the following:

- ***regarding claim 19***, treating the wall of the ink passage with a surfactant to increase the hydrophilicity of the wall of the ink passage before initial use of ink flow passage

Uchikata discloses:

- ***regarding claim 19***, treating the wall of the ink passage with a surfactant to increase the hydrophilicity of the wall of the ink passage before initial use of ink flow passages (Column 8, Lines 52-63), for the purpose of preventing a deposition of bubbles

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Uchikata into the device of Hobson, for the purpose of preventing a deposition of bubbles.

Claims 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) as modified by Uchikata (U.S. Pat. 6,024,428) as applied to claim 19 above, and further in view of Engel et al (U.S. Pat. 6,926,957).

Hobson as modified by Uchikata discloses all of the claimed limitations except for the following:

- ***regarding claims 20***, wherein the surfactant has an HLB value of 3 to 18
- ***regarding claims 21***, wherein the surfactant has an HLB value of 6 to 15

Engel et al discloses the following:

- ***regarding claims 20***, wherein the surfactant has an HLB value of 3 to 18
(Column 7, Lines 19 – 23)
- ***regarding claims 21***, wherein the surfactant has an HLB value of 6 to 15
(Column 7, Lines 19 – 23)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of surfactant has an HLB value of 3 to 18 ; surfactant has an HLB value of 6 to 15 as taught by Engel et al into the device of Hobson as modified by Uchikata, for the purpose of improving the coatability of the film.

Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) in view of Tsukuda (U.S. Pat. 6,626,516)

Hobson et al discloses all the claimed limitations except for the following:

- **regarding claims 22, 23**, step of filling ink into the ink cartridge includes passing ink through the filter as the ink cartridge fills with ink

Tsukuda discloses:

- **regarding claims 22, 23**, step of filling ink into the ink cartridge (6) includes passing ink through the filter (16) as the ink cartridge (6) fills with ink (Figure 1; Column 4, Lines 54-59), for the purpose of removing dirt from printing fluids

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Tsukuda into the device of Hobson et al, for the purpose of removing air from an ink delivery system in an ink jet printer

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hobson et al (U.S. Pat. 6,199,979) as modified by Uchikata (U.S. Pat. 6,024,428) as applied to claim 19 above, and further in view of Tsukuda (U.S. Pat. 6,626,516)

Hobson as modified by Uchikata discloses all the claimed limitations above except for the following:

- **regarding claim 24**, step of filling ink into the ink cartridge includes passing ink through the filter as the ink cartridge fills with ink

Tsukuda discloses:

- **regarding claim 24**, step of filling ink into the ink cartridge (6) includes passing ink through the filter (16) as the ink cartridge (6) fills with ink (Figure 1; Column 4, Lines 54-59), for the purpose of removing dirt from printing fluids

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Tsukuda into the device of Hobson as modified by Uchikata, for the purpose of removing air from an ink delivery system in an ink jet printer

Response to Arguments

Applicant's arguments filed 1/18/2007 have been fully considered but they are not persuasive.

Regarding claims 1 and 10, applicant argues that Hobson does not disclose, "filling an ink into the ink cartridge to pass through the treated filter. However, Hobson discloses an ink printer cartridge containing ink (cartridge filled with ink) comprising an ink filter for removing contaminants and/or agglomerates from ink within the ink printer cartridge (ink passes through the treated filter) (Figure 1; Column 3, Lines 13-24; Column 5, Lines 13-16)

Applicant's arguments with respect to claims 19-24 have been considered but are moot in view of the new ground(s) of rejection. Please see the above rejections regarding Hobson et al (U.S. Pat. 6,199,979) in view of Uchikata (U.S. Pat. 6,024,428).

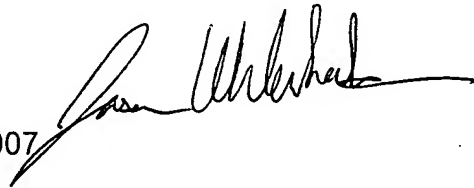
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSU
January 23, 2007



STEPHEN MEIER
SUPERVISORY PATENT EXAMINER